

38. (Amended) The use of a catalyst of claim 1 or 2 in a catalytic process.

39. (Amended) The use of a catalyst of claim 2 in dehydrogenation reactions.

40. (Amended) The use of a catalyst of claim 2 in the dehydrogenation of alkanes.

41. (Amended) The use of a catalyst of claim 2 in the dehydrogenation of C₂₋₄ alkanes.

42. (Amended) The use of a catalyst of claim 2 in the dehydrogenation of propane.

43. (Amended) The use of a catalyst of claim 2 in the hydrogenation of unsaturated hydrocarbons.

REMARKS

The specification has been amended to insert a cross-reference to the International Application.

The claims have been amended to correct their improper multiple dependency.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

4. (Amended) The catalyst of [the claims 1-3] claim 1 or 2, wherein M^{2+} is Mg.

5. (Amended) The catalyst of [the claims 1-4] claim 1 or 2, wherein M^{3+} is Al.

6. (Amended) The catalyst of [the claims 1-5] claim 1 or 2, wherein M^{3+} is further Ga.

7. (Amended) The catalyst of [the claims 1-6] claim 1 or 2, wherein the at least one metal salt or complex has been added in an aqueous solution.

11. (Amended) The catalyst of [the claims 9 and 10] claim 9, wherein the at least one metal salt or complex has been added in an aqueous inorganic acid solution.

13. (Amended) The catalyst of [the] claim 9 [and 10], wherein the acid aqueous solution is an aqueous solution of an organic acid.

15. (Amended) The catalyst of [the claims 1 and 2] claim 1 or 2, wherein the at least one metal salt or complex has been added in an organic solution.

17. (Amended) The catalyst of [the claim 1 and 2] claim 1 or 2, wherein the at least one metal salt or complex has been added by wet impregnation.

18. (Amended) The catalyst of [the claims 1-17] claim 1 or 2, wherein the contact time between the metal containing solution and the carrier material has been between 0.01 and 30 hours, preferably between 0.05-5 hours.

19. (Amended) The catalyst of [the claims 1 or 2] claim 1 or 2, wherein the at least one metal salt or complex has been added by incipient impregnation.

20. (Amended) The catalyst of [the claims 1-19] claim 1 or 2, wherein the hydrotalcite based carrier has been subject to preparation by mixing $Mg(NO_3)_2 \cdot 6H_2O$ and $Al(NO_3)_3 \cdot 9H_2O$ dissolved in water with a basic aqueous solution containing OH and CO_3 anions.

24. (Amended) The catalyst of [the claims 1-23] claim 1 or 2, wherein the hydrotalcite based carrier has been subject to wet impregnation as defined in the claim 17 and anion exchange.

25. (Amended) The catalyst of [the claims 1-24] claim 1 or 2, wherein the hydrotalcite based carrier has been subject to a combination of any of the treatments of the claims 20-24.

26. (Amended) The catalyst of [the claims 1-22] claim 1 or 2, wherein the hydrotalcite based carrier has been calcined at a temperature of 700 to 1200°C, preferably 700-800°C.

27. (Amended) The catalyst of [the claims 1-26] claim 1 or 2, wherein the final catalyst calcination takes place at a temperature of 400 to 1200°C, preferably 560-800°C.

28. (Amended) The catalyst of [the claims 1-27] claim 1 or 2, wherein a binder is admixed.

29. (Amended) The catalyst of [the claims 2-28] claim 2, wherein the hydrotalcite based carrier has been impregnated by at least one metal selected from the group VIII of the periodical table of the elements.

30. (Amended) The catalyst of [the claims 2-29] claim 2, wherein the hydrotalcite based carrier has been impregnated by at least one metal selected from the group IVA of the periodical table of the elements.

33. (Amended) The catalyst of [the claims 30 and 31] claim 30 or 31, wherein the hydrotalcite based carrier has been impregnated by at least one salt complex of Sn from the group IVA of the periodical table of the elements.

34. (Amended) The catalyst of [the claims 32 and 33] claim 32, wherein the hydrotalcite based carrier has been impregnated by at least one salt complex of Pt as the group VIII and by at least one salt or complex of Sn as the group IVA of the periodical table of the elements metal.

36. (Amended) The catalyst of [the claims] claim 29, 31 or [and] 32, wherein the salt of Pt is $H_2PtCl_6 \cdot 6H_2O$.

37. (Amended) The catalyst of [the claims 30-33] claim 30, 31 or 32, wherein the salt of Sn is $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$.

38. (Amended) The use of a catalyst of [any of the claims 1-37] claim 1 or 2 in a catalytic process.

39. (Amended) The use of a catalyst of [any of the claims 2-37] claim 2 in dehydrogenation reactions.

40. (Amended) The use of a catalyst of [any of the claims 2-37] claim 2 in the dehydrogenation of alkanes.

41. (Amended) The use of a catalyst of [any of the claims 2-37] claim 2 in the dehydrogenation of C_{2-4} alkanes.

42. (Amended) The use of a catalyst of [any of the claims 2-37] claim 2 in the dehydrogenation of propane.

43. (Amended) The use of a catalyst of [any of the claims 2-37] claim 2 in the hydrogenation of unsaturated hydrocarbons.